

SEQUENCE LISTING

<110> FUSO PHARMACEUTICAL INDUSTRIES, LTD.

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<222> (6)..(1826)

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<222> (213)..(953)

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<222> (1080)..(1826)

<223> Phosphatase Domain 2

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<308> DDBJ/EMBL/GenBank Accession No.Y00815

<309> 1995-09-19

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Met Arg Arg Leu Asn Tyr Gln Thr Pro Gly Met Arg Asp His Pro Pro	
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atc ccc atc acc gac ctg gcg gac aac atc gag cgc ctc aaa gcc aac	146
Ile Pro Ile Thr Asp Leu Ala Asp Asn Ile Glu Arg Leu Lys Ala Asn	
35 40 45	
gat ggc ctc aag ttc tcc cag gag tat gag tcc atc gac cct gga cag	194
Asp Gly Leu Lys Phe Ser Gln Glu Tyr Glu Ser Ile Asp Pro Gly Gln	
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cag ttc acg tgg gag aat tca aac ctg gag gtg aac aag ccc aag aac	242
Gln Phe Thr Trp Glu Asn Ser Asn Leu Glu Val Asn Lys Pro Lys Asn	
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Arg Tyr Ala Asn Val Ile Ala Tyr Asp His Ser Arg Val Ile Leu Thr	
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tct atc gat ggc gtc ccc ggg agt gac tac atc aat gcc aac tac atc	338
Ser Ile Asp Gly Val Pro Gly Ser Asp Tyr Ile Asn Ala Asn Tyr Ile	
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gat ggc tac cgc aag cag aat gcc tac atc gcc acg cag ggc ccc ctg	386
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ccc gag acc atg ggc gat ttc tgg aga atg gtg tgg gaa cag cgc acg	434
Pro Glu Thr Met Gly Asp Phe Trp Arg Met Val Trp Glu Gln Arg Thr	
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gcc act gtg gtc atg atg aca cgg ctg gag gag aag tcc cgg gta aaa	482
Ala Thr Val Val Met Met Thr Arg Leu Glu Glu Lys Ser Arg Val Lys	
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Cys Asp Gln Tyr Trp Pro Ala Arg Gly Thr Glu Thr Cys Gly Leu Ile	

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Gln Val Thr Leu Leu Asp Thr Val Glu Leu Ala Thr Tyr Thr Val Arg				
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acc ttc gca ctc cac aag agt ggc tcc agt gag aag cgt gag ctg cgt				626
Thr Phe Ala Leu His Lys Ser Gly Ser Ser Glu Lys Arg Glu Leu Arg				
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Gln Phe Gln Phe Met Ala Trp Pro Asp His Gly Val Pro Glu Tyr Pro				
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Thr Pro Ile Leu Ala Phe Leu Arg Arg Val Lys Ala Cys Asn Pro Leu				
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gac gca ggg ccc atg gtg gtg cac tgc agc gcg ggc gtg ggc cgc acc				770
Asp Ala Gly Pro Met Val Val His Cys Ser Ala Gly Val Gly Arg Thr				
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Gly Cys Phe Ile Val Ile Asp Ala Met Leu Glu Arg Met Lys His Glu				
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Lys Thr Val Asp Ile Tyr Gly His Val Thr Cys Met Arg Ser Gln Arg				
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Asn Tyr Met Val Gln Thr Glu Asp Gln Tyr Val Phe Ile His Glu Ala				
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Val Thr Ala Met Glu Leu Glu Phe Lys Leu Leu Ala Ser Ser Lys Ala				

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Phe Val Val Asp Pro Met Ala Glu Tyr Asn Met Pro Gln Tyr Ile Leu			
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<223> "Xaa"="Ile" or "Val".

<220>

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Glu Asp Gln Thr Gly Leu Ser Gly Gly Val Ala Ser Phe Val Cys Gln
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atc tat gag tgt aca gct act aac agc ctg ggt gag atc aac act agt 697
Ile Tyr Glu Cys Thr Ala Thr Asn Ser Leu Gly Glu Ile Asn Thr Ser
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 Ser Ile Asp Met Gly Pro Gln Leu Lys Val Val Glu Lys Ala Arg Thr
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 Ala Thr Met Leu Cys Ala Ala Gly Gly Asn Pro Asp Pro Glu Ile Ser
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Ala Val, Asp Gly Glu Asp Arg Gly Arg His Val Val Asp Gly Ile Ser
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 655 660 665
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 Pro Arg Lys Val Glu Val Glu Pro Leu Asn Ser Thr Ala Val His Val
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Ser Pro Ser Ile Gln Ser Arg Thr Met Pro Val Glu Gln Val Phe Ala
 975 980 985
 aag aac ttc cgg gtg gcg gct gca atg aag acg tct gtg ctg ctc agc 3433
 Lys Asn Phe Arg Val Ala Ala Ala Met Lys Thr Ser Val Leu Leu Ser
 990 995 1000 1005
 tgg gag gtt ccc gac tcc tat aag tca gct gtg ccc ttt aag att ctg 3481
 Trp Glu Val Pro Asp Ser Tyr Lys Ser Ala Val Pro Phe Lys Ile Leu
 1010 1015 1020
 tac aat ggg cag agt gtg gag gtg gac ggg cac tcg atg cgg aag ctg 3529
 Tyr Asn Gly Gln Ser Val Glu Val Asp Gly His Ser Met Arg Lys Leu
 1025 1030 1035
 atc gca gac ctg cag ccc aac aca gag tac tcg ttt gtg ctg atg aac 3577
 Ile Ala Asp Leu Gln Pro Asn Thr Glu Tyr Ser Phe Val Leu Met Asn
 1040 1045 1050
 cgt ggc agc agc gca ggg ggc ctg cag cac ctg gtg tcc atc cgc aca 3625
 Arg Gly Ser Ser Ala Gly Gly Leu Gln His Leu Val Ser Ile Arg Thr
 1055 1060 1065
 gcc ccc gac ctc ctg cct cac aag ccg ctg cct gcc tct gcc tac ata 3673
 Ala Pro Asp Leu Leu Pro His Lys Pro Leu Pro Ala Ser Ala Tyr Ile
 1070 1075 1080 1085
 gag gac ggc cgc ttc gat ctc tcc atg ccc cat gtg caa gac ccc tcg 3721
 Glu Asp Gly Arg Phe Asp Leu Ser Met Pro His Val Gln Asp Pro Ser
 1090 1095 1100
 ctt gtc agg tgg ttc tac att gtt gtg gta ccc att gac cgt gtg ggc 3769
 Leu Val Arg Trp Phe Tyr Ile Val Val Val Pro Ile Asp Arg Val Gly
 1105 1110 1115
 ggg agc atg ctg acg cca agg tgg agc aca ccc gag gaa ctg gag ctg 3817
 Gly Ser Met Leu Thr Pro Arg Trp Ser Thr Pro Glu Glu Leu Glu Leu
 1120 1125 1130
 gac gag ctt cta gaa gcc atc gag caa ggc gga gag gag cag cgg cgg 3865
 Asp Glu Leu Leu Glu Ala Ile Glu Gln Gly Gly Glu Glu Gln Arg Arg
 1135 1140 1145
 cgg cgg cgg cag gca gaa cgt ctg aag cca tat gtg gct gct caa ctg 3913

Arg Arg Arg Gln Ala Glu Arg Leu Lys Pro Tyr Val Ala Ala Gln Leu
 1150 1155 1160 1165
 gat gtg ctc ccg gag acc ttt acc ttg ggg gac aag aag aac tac cgg 3961
 Asp Val Leu Pro Glu Thr Phe Thr Leu Gly Asp Lys Lys Asn Tyr Arg
 1170 1175 1180
 ggc ttc tac aac cgg ccc ctg tct ccg gac ttg agc tac cag tgc ttt 4009
 Gly Phe Tyr Asn Arg Pro Leu Ser Pro Asp Leu Ser Tyr Gln Cys Phe
 1185 1190 1195
 gtg ctt gcc tcc ttg aag gaa ccc atg gac cag aag cgc tat gcc tcc 4057
 Val Leu Ala Ser Leu Lys Glu Pro Met Asp Gln Lys Arg Tyr Ala Ser
 1200 1205 1210
 agc ccc tac tcg gat gag atc gtg gtc cag gtg aca cca gcc cag cag 4105
 Ser Pro Tyr Ser Asp Glu Ile Val Val Gln Val Thr Pro Ala Gln Gln
 1215 1220 1225
 cag gag gag ccg gag atg ctg tgg gtg acg ggt ccc gtg ctg gca gtc 4153
 Gln Glu Glu Pro Glu Met Leu Trp Val Thr Gly Pro Val Leu Ala Val
 1230 1235 1240 1245
 atc ctc atc atc ctc att gtc atc gcc atc ctc ttg ttc aaa agg aaa 4201
 Ile Leu Ile Ile Leu Ile Val Ile Ala Ile Leu Leu Phe Lys Arg Lys
 1250 1255 1260
 agg acc cac tct ccg tcc tct aag gat gag cag tcg atc gga ctg aag 4249
 Arg Thr His Ser Pro Ser Ser Lys Asp Glu Gln Ser Ile Gly Leu Lys
 1265 1270 1275
 gac tcc ttg ctg gcc cac tcc tct gac cct gtg gag atg cgg agg ctc 4297
 Asp Ser Leu Leu Ala His Ser Ser Asp Pro Val Glu Met Arg Arg Leu
 1280 1285 1290
 aac tac cag acc cca ggt atg cga gac cac cca ccc atc ccc atc acc 4345
 Asn Tyr Gln Thr Pro Gly Met Arg Asp His Pro Pro Ile Pro Ile Thr
 1295 1300 1305
 gac ctg gcg gac aac atc gag cgc ctc aaa gcc aac gat ggc ctc aag 4393
 Asp Leu Ala Asp Asn Ile Glu Arg Leu Lys Ala Asn Asp Gly Leu Lys
 1310 1315 1320 1325
 ttc tcc cag gag tat gag tcc atc gac cct gga cag cag ttc acg tgg 4441

Phe Ser Gln Glu Tyr Glu Ser Ile Asp Pro Gly Gln Gln Phe Thr Trp	
1330	1335
1340	
gag aat tca aac ctg gag gtg aac aag ccc aag aac cgc tat gcg aat	4489
Glu Asn Ser Asn Leu Glu Val Asn Lys Pro Lys Asn Arg Tyr Ala Asn	
1345	1350
1355	
gtc atc gcc tac gac cac tct cga gtc atc ctt acc tct atc gat ggc	4537
Val Ile Ala Tyr Asp His Ser Arg Val Ile Leu Thr Ser Ile Asp Gly	
1360	1365
1370	
gtc ccc ggg agt gac tac atc aat gcc aac tac atc gat ggc tac cgc	4585
Val Pro Gly Ser Asp Tyr Ile Asn Ala Asn Tyr Ile Asp Gly Tyr Arg	
1375	1380
1385	
aag cag aat gcc tac atc gcc acg cag ggc ccc ctg ccc gag acc atg	4633
Lys Gln Asn Ala Tyr Ile Ala Thr Gln Gly Pro Leu Pro Glu Thr Met	
1390	1395
1400	1405
ggc gat ttc tgg aga atg gtg tgg gaa cag cgc acg gcc act gtg gtc	4681
Gly Asp Phe Trp Arg Met Val Trp Glu Gln Arg Thr Ala Thr Val Val	
1410	1415
1420	
atg atg aca cgg ctg gag gag aag tcc cgg gta aaa tgt gat cag tac	4729
Met Met Thr Arg Leu Glu Glu Lys Ser Arg Val Lys Cys Asp Gln Tyr	
1425	1430
1435	
tgg cca gcc cgt ggc acc gag acc tgt ggc ctt att cag gtg acc ctg	4777
Trp Pro Ala Arg Gly Thr Glu Thr Cys Gly Leu Ile Gln Val Thr Leu	
1440	1445
1450	
ttg gac aca gtg gag ctg gcc aca tac act gtg cgc acc ttc gca ctc	4825
Leu Asp Thr Val Glu Leu Ala Thr Tyr Thr Val Arg Thr Phe Ala Leu	
1455	1460
1465	
cac aag agt ggc tcc agt gag aag cgt gag ctg cgt cag ttt cag ttc	4873
His Lys Ser Gly Ser Ser Glu Lys Arg Glu Leu Arg Gln Phe Gln Phe	
1470	1475
1480	1485
atg gcc tgg cca gac cat gga gtt cct gag tac cca act ccc atc ctg	4921
Met Ala Trp Pro Asp His Gly Val Pro Glu Tyr Pro Thr Pro Ile Leu	
1490	1495
1500	
gcc ttc cta cga cgg gtc aag gcc tgc aac ccc cta gac gca ggg ccc	4969

Ala Phe Leu Arg Arg Val Lys Ala Cys Asn Pro Leu Asp Ala Gly Pro
1505 1510 1515
atg gtg gtg cac tgc agc gcg ggc gtg ggc cgc acc ggc tgc ttc atc 5017
Met Val Val His Cys Ser Ala Gly Val Gly Arg Thr Gly Cys Phe Ile
1520 1525 1530
gtg att gat gcc atg ttg gag cgg atg aag cac gag aag acg gtg gac 5065
Val Ile Asp Ala Met Leu Glu Arg Met Lys His Glu Lys Thr Val Asp
1535 1540 1545
atc tat ggc cac gtg acc tgc atg cga tca cag agg aac tac atg gtg 5113
Ile Tyr Gly His Val Thr Cys Met Arg Ser Gln Arg Asn Tyr Met Val
1550 1555 1560 1565
cag acg gag gac cag tac gtg ttc atc cat gag gcg ctg ctg gag gct 5161
Gln Thr Glu Asp Gln Tyr Val Phe Ile His Glu Ala Leu Leu Glu Ala
1570 1575 1580
gcc acg tgc ggc cac aca gag gtg cct gcc cgc aac ctg tat gcc cac 5209
Ala Thr Cys Gly His Thr Glu Val Pro Ala Arg Asn Leu Tyr Ala His
1585 1590 1595
atc cag aag ctg ggc caa gtg cct cca ggg gag agt gtg acc gcc atg 5257
Ile Gln Lys Leu Gly Gln Val Pro Pro Gly Glu Ser Val Thr Ala Met
1600 1605 1610
gag ctc gag ttc aag ttg ctg gcc agc tcc aag gcc cac acg tcc cgc 5305
Glu Leu Glu Phe Lys Leu Leu Ala Ser Ser Lys Ala His Thr Ser Arg
1615 1620 1625
ttc atc agc gcc aac ctg ccc tgc aac aag ttc aag aac cgg ctg gtg 5353
Phe Ile Ser Ala Asn Leu Pro Cys Asn Lys Phe Lys Asn Arg Leu Val
1630 1635 1640 1645
aac atc atg ccc tac gaa ttg acc cgt gtg tgt ctg cag ccc atc cgt 5401
Asn Ile Met Pro Tyr Glu Leu Thr Arg Val Cys Leu Gln Pro Ile Arg
1650 1655 1660
ggt gtg gag ggc tct gac tac atc aat gcc agc ttc ctg gat ggt tat 5449
Gly Val Glu Gly Ser Asp Tyr Ile Asn Ala Ser Phe Leu Asp Gly Tyr
1665 1670 1675
aga cag cag aag gcc tac ata gct aca cag ggg cct ctg gca gag agc 5497

Arg Gln Gln Lys Ala Tyr Ile Ala Thr Gln Gly Pro Leu Ala Glu Ser

1680

1685

1690

acc gag gac ttc tgg cgc atg cta tgg gag cac aat tcc acc atc atc 5545

Thr Glu Asp Phe Trp Arg Met Leu Trp Glu His Asn Ser Thr Ile Ile

1695

1700

1705

gtc atg ctg acc aag ctt cgg gag atg ggc agg gag aaa tgc cac cag 5593

Val Met Leu Thr Lys Leu Arg Glu Met Gly Arg Glu Lys Cys His Gln

1710

1715

1720

1725

tac tgg cca gca gag cgc tct gct cgc tac cag tac ttt gtt gtt gac 5641

Tyr Trp Pro Ala Glu Arg Ser Ala Arg Tyr Gln Tyr Phe Val Val Asp

1730

1735

1740

ccg atg gct gag tac aac atg ccc cag tat atc ctg cgt gag ttc aag 5689

Pro Met Ala Glu Tyr Asn Met Pro Gln Tyr Ile Leu Arg Glu Phe Lys

1745

1750

1755

gtc acg gat gcc cgg gat ggg cag tca agg aca atc cgg cag ttc cag 5737

Val Thr Asp Ala Arg Asp Gly Gln Ser Arg Thr Ile Arg Gln Phe Gln

1760

1765

1770

ttc aca gac tgg cca gag cag ggc gtg ccc aag aca ggc gag gga ttc 5785

Phe Thr Asp Trp Pro Glu Gln Gly Val Pro Lys Thr Gly Glu Gly Phe

1775

1780

1785

att gac ttc atc ggg cag gtg cat aag acc aag gag cag ttt gga cag 5833

Ile Asp Phe Ile Gly Gln Val His Lys Thr Lys Glu Gln Phe Gly Gln

1790

1795

1800

1805

gat ggg cct atc acg gtg cac tgc agt gct ggc gtg ggc cgc acc ggg 5881

Asp Gly Pro Ile Thr Val His Cys Ser Ala Gly Val Gly Arg Thr Gly

1810

1815

1820

gtg ttc atc act ctg agc atc gtc ctg gag cgc atg cgc tat gag ggc 5929

Val Phe Ile Thr Leu Ser Ile Val Leu Glu Arg Met Arg Tyr Glu Gly

1825

1830

1835

gtg gtc gac atg ttt cag acc gtg aag acc ctg cgt aca cag cgt cct 5977

Val Val Asp Met Phe Gln Thr Val Lys Thr Leu Arg Thr Gln Arg Pro

1840

1845

1850

gcc atg gtg cag aca gag gac cag tat cag ctg tgc tac cgt gcg gcc 6025

Ala Met Val Gln Thr Glu Asp Gln Tyr Gln Leu Cys Tyr Arg Ala Ala

1855

1860

1865

ctg gag tac ctc ggc agc ttt gac cac tat gca acg taactaccgc 6071

Leu Glu Tyr Leu Gly Ser Phe Asp His Tyr Ala Thr 1881

1870

1875

1880

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